

REMARKS

STATUS OF THE CLAIMS

Claims 1-13 are currently pending. Claim 1 is the pending independent claim. The Applicants respectfully traverse the Examiner's rejections under 35 USC § 103(a). Reconsideration and allowance of the claims are requested.

OBJECTIONS TO THE SPECIFICATION

The Office Action objects to the description of the Copper Corrosion Test (CCT) and requests clarification.

The Copper Corrosion Test (CCT) measures the amount of sulfur activity in the extreme pressure additive. The typical manner in which sulfur activity is determined using the CCT test is by copper weight loss measured in mg. The ISOT measures copper weight loss in mg in the finished fluid. The instantly disclosed CCT test therefore does not conflict with the reference cited.

CLAIM REJECTIONS UNDER §103

US 5,498,355 (Perozzi) in view of US 5,254,272 (Walters)

Claims 1, 9-11, and 12 are rejected under 35 U.S.C. §103(a) as allegedly unpatentable over US 5,498,355 (Perozzi) in view of US 5,254,272 (Walters). For at least the following reasons, this rejection is respectfully traversed.

Claim 1 defines a gear oil composition comprising (B) a hydrocarbyl polysulfide, (C) a dihydrocarbyl dithiophosphate ester or salt, and (D) a dihydrocarbyl monothiophosphate amine salt. Neither Perozzi, Walters, nor their combination defines such a gear oil composition. In particular, Perozzi describes a crankcase lubricating oil composition that includes a first succinic

dispersant and second succinic dispersant. The crankcase composition is described as having enhanced performance results when metal-containing detergents are included (col. 2, lines 25-34). As optional components, amongst many choices, the Office Action points to the potential inclusion of a hydrocarbyl dithiophosphate salt (col. 9, line 41) and may include a dihydrocarbyl polysulfide (col. 16, line 28) of unspecified sulfur activity. Nothing in Perozzi discloses the use of a dihydrocarbyl monothiophosphate, as a critical or optional component. For this, the Office Action points to Walters. Walters describes a metal-free hydraulic fluid that comprises a metal-free universal anti-wear additive and a corrosion inhibitor. The metal-free anti-wear agent is disclosed as possibly comprising a dihydrocarbyl thiophosphate.

Neither reference discloses a gear oil composition comprising the components claimed in claim 1. Further, one of ordinary skill in the art would not be motivated to combine Perozzi and Walters to arrive at the elements of claim 1 absent impermissible hindsight. For example, Perozzi teaches a crankcase composition and Walters teaches a hydraulic fluid. These fluids are used in different applications and are designed to meet different test specifications. Further, neither is a gear oil composition. Even further, nothing in either reference discloses or suggests that combining a crankcase composition with a hydraulic fluid would provide a gear oil composition. For the sake of argument, even if one were to combine the crankcase composition of Perozzi with the hydraulic fluid of Walters, one would not arrive at the present composition. One reading Perozzi would learn of the benefits of including a metal-containing detergent and when reading Walters would learn of the benefits of having a metal-free fluid. Thus, one would never combine the components of the two references. Perozzi explicitly teaches that metal detergents are preferably present in the composition for enhanced stability and wear inhibition. See Column 2, lines 32-34. In fact, every single example given in Table 1 of Perozzi in columns 21-23 contains at least one metal detergent including either or both of HITEC[®] 7304 and 614 additives. These additives are disclosed in Column 21, lines 22-24, as low-base calcium alkylbenzene sulfonates (i.e., metal detergents).

In contrast to Perozzi, Walters describes a composition free from metal components. Therefore, there is a clear conflict between the teaching *for* metal detergents in Perozzi versus the teaching *against* metal detergents in Walters, thereby destroying any notion of a motivation to combine the two references.

Thus, claim 1 is nonobvious over Perozzi in view of Walters. Reconsideration and allowance of claim 1 are respectfully requested.

Dependent claims 9-11 and 12 depend from independent claim 1, and contain additional important aspects of at least one embodiment of the invention. Therefore, dependent claims 9-11 and 12 are likewise nonobvious over Perozzi in view of Walters. Reconsideration and allowance of dependent claims 9-11 and 12 are respectfully requested.

EP 744 456 (EP '456) in view of US 5,171,466 (Korosec) and Amsoil Synthetic Lubricants

Claims 1, 3, 4, 6 and 8-13 are rejected under 35 U.S.C. §103(a) as allegedly unpatentable over EP 744 456 (EP '456) in view of US 5,171,466 (Korosec) and Amsoil Synthetic Lubricants. For at least the following reasons, this rejection is respectfully traversed.

Claim 1 defines a gear oil composition comprising (B) a hydrocarbyl polysulfide, (C) a dihydrocarbyl dithiophosphate ester or salt, and (D) a dihydrocarbyl monothiophosphate amine salt. None of EP '456, Korosec, Amsoil Synthetic Lubricants, or their combination defines such a gear oil composition.

EP '456 does not teach or suggest the limitation of a hydrocarbyl polysulfide having a sulfur activity greater than 125 mg (CCT) as claimed in claim 1. In fact, EP '456 states the following:

Thus pursuant to *this invention* the sulfur component or components used should give a copper weight loss in this test of *not more than 65 milligrams*, preferably 50 mg or less, more preferably 35 mg or less, still more preferably 25 mg or less, and *most preferably less than 20 milligrams*. In short, the lower the value (as

long as there is some activity), the more preferred the material for use in the practice of this invention.

EP '456, Page 4, lines 31-34 (emphasis added). Based on this description, EP '456 clearly teaches a CCT sulfur activity of considerably less than the "more than 125 mg" requirement of claim 1 in the present application. Thus, EP '456 teaches away from using a hydrocarbyl polysulfide having a sulfur activity of **more than** 125 mg (CCT).

Neither Korosec or Amsoil Synthetic Lubricants compensate for the deficiencies of EP '456 discussed above. As stated above, it is a requirement in making out a *prima facie* case of obviousness that all of the limitations of the claims must be taught or suggested by the cited references. The limitation of a hydrocarbyl polysulfide with a sulfur activity of greater than 125 mg CCT has not been met. Thus, claim 1 is nonobvious over EP '456 in view of Korosec and Amsoil Synthetic Lubricants. Reconsideration and allowance of claim 1 are respectfully requested.

Dependent claims 3, 4, 6, and 8-13 depend from independent claim 1, and contain additional important aspects of at least one embodiment of the invention. Therefore, dependent claims 3, 4, 6, and 8-13 are likewise nonobvious over EP '456 in view of Korosec and Amsoil Synthetic Lubricants. Reconsideration and allowance of dependent claims 3, 4, 6, and 8-13 are respectfully requested.

EP '456 in view of Korosec, Amsoil Synthetic Lubricants, and US 6,689,723 (Sullivan)

Claim 2 is rejected under 35 U.S.C. §103(a) as allegedly unpatentable over EP '456 in view of Korosec, Amsoil Synthetic Lubricants, and US 6,689,723 (Sullivan). Dependent claim 2 depends from independent claim 1, and contains additional important aspects of at least one embodiment of the invention. As argued above, EP '456 teaches away from the presently claimed invention. Sullivan does not make up for the deficiencies of EP '456. Therefore, dependent claim 2, as dependent from nonobvious claim 1, is also nonobvious over EP '456 in

view of Korosec, Amsoil Synthetic Lubricants, and Sullivan. Reconsideration and allowance of dependent claim 2 are respectfully requested.

Perozzi in view of Walters and US 6,133,207 (Milner)

Claim 7 is rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Perozzi in view of Walters and US 6,133,207 (Milner). Dependent claim 7 depends from independent claim 1, and contains additional important aspects of at least one embodiment of the invention. Claim 1 is nonobvious over Perozzi in view of Walters. Milner does not make up for the deficiencies in these two references. Therefore, dependent claim 7 is nonobvious over Perozzi in view of Walters and Milner. Reconsideration and allowance of dependent claim 7 are respectfully requested.

Perozzi in view of Walters and US 4,282,153 (Minn)

Claim 5 is rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Perozzi in view of Walters and US 4,282,153 (Minn). Dependent claim 5 depends from independent claim 1, and contains additional important aspects of at least one embodiment of the invention. Claim 1 is nonobvious over Perozzi in view of Walters. Minn does not make up for the deficiencies in these two references. Therefore, dependent claim 5 is nonobvious over Perozzi in view of Walters and Minn. Reconsideration and allowance of dependent claim 5 are respectfully requested.

CONCLUSION

In light of the foregoing, Applicants urge the Examiner to reconsider the application, to withdraw the rejections, and to issue a notice of allowance at the earliest possible convenience.

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In the event this response is not timely filed, Applicants hereby petition for the appropriate extension of time and request that the fee for the extension along with any other fees which may be due with respect to this paper be charged to our **Deposit Account No. 12-2355**.

Respectfully submitted,
LUEDEKA, NEELY & GRAHAM, P.C.
By:

Leah Oubre Robinson
Registration No. 44,990

Date: November 30, 2006
P.O. Box 1871
Knoxville, Tennessee 37901
(865) 546-4305